# **News** From The Field

April - June 2024 Vol 2



### **Our Mission**

Sea turtles have existed on Earth for over 120 million years and there are currently seven species left in the world. These incredible animals grace the waters of all the world's oceans except the Arctic.

Oceans play a critical role in sustaining human life by providing essential resources such as food, freshwater and oxygen. Therefore, preserving and protecting our oceans is crucial for the survival of our species.

As "keystone" species, sea turtles play a vital role in maintaining the health of the ocean, including protecting fish stocks, keeping coral reefs healthy, and preventing sea grass meadows from overgrowing and dying.

However, sea turtles face many threats to their survival.

ORP is on a mission to protect sea turtles and their habitats through rescue and rehabilitation, scientific research, and education and outreach.

Olive Ridley Project is a registered charity: 1165905 England & Wales CR/04/2022 Maldives

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## Our Work



#### Sea Turtle Rescue & Rehabilitation

We treat injured sea turtles rescued in the Maldives at our <u>Marine Turtle Rescue Centre</u>, which has a fully equipped veterinary clinic and a resident veterinary team. We also operate a Sea Turtle Rehabilitation Centre. Both are located in the Maldives.



#### Scientific Research

We conduct research on sea turtle populations, distribution, health and threats to improve scientific knowledge and inform sea turtle conservation policy.



### **Environmental Education**

Education is a powerful tool to increase awareness, engage people and stimulate action. We educate school children, communities, divers, fishermen, tourists, resort staff, biologists, and the general public, in person and <u>online</u>. We also offer <u>volunteer</u> and internship programs



### **Collaboration & Community Outreach**

To create long lasting change, we ensure that our conservation initiatives are practised from ground-up. We therefore collaborate with affected industries, communities, governments, local and International NGOs, in order to apply research to practice.

# By the Numbers

Rescue, rehabilitation and scientific research .....



7,812

Sea turtles identified



>45,8K

Sea turtle sightings recorded in the Indian Ocean



838

Sites w/sea turtles sighted



1,594

Nests recorded



52,9K

Hatchings counted



244

Turtle patients admitted



91

Turtle patients deceased



5

Rehabilitated olive ridley turtles satellite tagged

Environmental education, collaboration and community outreach ······



14.34K

Kgs of ghost gear removed



58.4K

Square metres of ghost net repurposed



314

Volunteers hosted at the Rescue Centre



30

Sea Turtle Guardian Programme Graduates



43.5K

Individuals educated



2.3M

YouTube views



29

**Publications** 



The second quarter of 2024 was a time for celebrations: we completed an exploratory expedition; opened a new rehabilitation centre; achieved new Photo-ID milestones; celebrated numerous sea turtle days across our locations; and launched our very own podcast - Sea Turtle Stories!

In April, ORP and the Maldives Underwater Initiative team from Laamu Atoll embarked on the exploratory Laamu Hope Spot Expedition. The expedition aimed to survey reefs and islands across the atoll for marine biodiversity and connect with communities throughout the region. This unique opportunity came at a crucial time, with many reefs worldwide, including those in Kenya and the Maldives, experiencing extensive coral bleaching due to exceptionally high water temperatures reaching up to 33°C this year. Read more about the Laamu Hope Spot Expedition on page 11.

Although the northeast monsoon and 'entanglement season' officially ended in early April, our veterinary team in the Maldives continued to operate at maximum capacity while also responding to calls about newly stranded sea turtles. Fortunately, we expanded our rehabilitation facilities during this period by opening the new Raa Atoll Sea Turtle Rehabilitation Centre! Kurangi, who was found entangled in a ghost net in Shaviyani Atoll in August 2023, is the centre's first patient. We continue her External Targeted Weight Therapy and dive training under the watchful eye of our onsite sea turtle biologist and intern, and the veterinary team. Read more about our patients on page 12 and 13.

We are excited to announce that, at the end of June, we reached a new milestone in our Photo-ID project with over 40,000 verified sea turtle encounters registered in the Maldives! We are grateful to all our collaborators and citizen scientists who contributed photos and encounter data, helping us reach this milestone.

Our team in Kenya welcomed four new students from two different Kenyan universities for three-month student attachments. During the programme, they shadow the team in Kenya, participate in educational outreach activities, and work on individual projects related to their on studies. We are excited about their ideas and look forward to their findings on marine plastics, drone surveys and perception of sea turtles and conservation in communities.

On June 16th, as part of World Sea Turtle Day celebrations, our Kenya team co-hosted the fifth Diani Sea Turtle Festival with our partners Conservation Education Society. The festival featured various marine conservation organisations offering

sea turtle-themed activities for schoolchildren and visitors of all ages throughout the day. Activities included sand sculpture competitions, scavenger hunts, and games focusing on marine topics.

In the Maldives, World Sea Turtle Day coincided with the national Eid al-Fitr holidays, so our team joined the celebrations with the special event Velaa Eid Ufaa in Laamu Atoll. Read more about it on page 9.

In addition to the many celebrations for World Turtle Day and World Sea Turtle Day on the ground at all of our bases, we also marked the occasion with the launch of our new podcast Sea Turtle Stories! Hosted by former ORP Veterinary Surgeon Dr. Minnie, the podcast features discussions with sea turtle experts from around the world on science, conservation, and culture, and the complex connections between these fields. Sea Turtle Stories is available on all major platforms, and we eagerly await feedback from our listeners!

Weather and water conditions continued to be challenging in Oman. However, being landlocked did not keep the team from making progress on our Photo-ID programme. We completed a first large analysis, which clearly shows the importance of Zighy Bay for juvenile green turtles. A change in on-site staff in June coincided with unexpected sea turtle sightings reported by the paragliding team at Zighy Bay, who observed multiple sea turtles from the air just outside our normal survey area (see photo on page 14). Our new Sea Turtle Biologist in Oman, Jasmine, will soon investigate the area for potential new sea turtle habitats.

In Pakistan, our nest monitoring efforts continued, and we were thrilled to record our first identified nesting green female from Pakistan in the Internet of Turtles database! Going forward, we aim to collect Photo-ID information in Pakistan, as we do in our other locations, and expand our ID network in the Indian Ocean.

We are also pleased to announce the opening of the Lhohi Upcycling Workspace in Noonu Atoll. This collaboration between the Lhohi Council, Zero Waste Maldives, ORP, and the International Pole and Line Foundation provides space for the repurposing of waste materials including ghost gear. Sponsored by a grant from Satlink, the workspace follows a circular economy model aimed at generating income for the community, similar to our project in Pakistan.

## **Our** Locations

## **United Kingdom** Established: 2013 Main Activities: Headquarters & educational outreach **Oman** Established: 2015 Base: Musandan Main Activities: Sea turtle population research, ghost gear recovery, research and mitigation, educational outreach Kenya

Established: 2018

Base: Diani

Main Activities: Sea turtle population research and habitat connectivity

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### Seychelles

Established: 2021

Base: Félicité

Main Activities: Sea turtle population research and habitat connectivity

**Pakistan** 

Established: 2015

Bases: Abdul Rehman Goth & Kakapir, Karachi Main Activities: Sea turtle population research, Ghost gear recovery and mitigation, ghost gear repurposing through circular economy projects, educational outreach

### **Maldives**

Established: 2013

Bases: Baa, Laamu, Noonu, North Malé, Raa & Shaviyani atolls

Main Activities: Sea turtle rescue and rehabilitation, sea turtle ecology research, ghost gear recovery, mitigation and research, educational outreach Facilities: Martine Turtle Rescue Centre, **Baa Atoll and Sea Turtle Rehabilitation** Centre, North Malé Atoll

# **ORP** Kenya

A major coral bleaching event affected reefs worldwide in April, including those in Kenya. Witnessing the devastation firsthand, we anxiously awaited the above-average rainfall predicted for East Africa in May and June, hoping it would aid coral recovery. Unfortunately, strong currents and low visibility, caused by worsening weather conditions, challenged our team's surveying efforts. May was particularly slow with sightings, but in June the numbers picked up, and despite the worrying coral bleaching, there were positive signs.



Houdini (G014) from Igloo dive site, last sighted in 2019.

We rediscovered sea turtles like Houdini (G014) from Igloo, last seen in 2019, in April. In May, we were excited by the return of G542 in Galu, not seen since 2021, and June, Spike (G078) and Aqua (G001) resurfaced after nearly a year. Re-sighting sea turtles like these indicates the long residency of Diani's reef and serves as a positive sign for the reef's resilience and potential for recovery. Recent rains brought much-needed relief by lowering water temperatures, which helped prevent further coral bleaching. We remain hopeful that some coral recovery will occur and our sea turtles will continue to thrive in a healthy reef ecosystem.

In May, we welcomed four students from Kenyatta University and the Technical University of Mombasa for three-month attachments. In addition to working on the projects related to their studies, they contributed to drone surveys and helped develop activities for the Diani Sea Turtle Festival. They also participated in the first Zero Plastics Festival in Diani, which ORP helped organise. We gave presentations and moderated discussions, effectively highlighting the threat of plastics to sea turtles as part of the three-day celebration for World Oceans Day.

The fifth Diani Sea Turtle Festival took place on 16th June, World Sea Turtle Day, at Safari Beach Hotel. We co-hosted the event with our partners the Conservation Education Society. We were delighted to receive support from over 20 different sponsors, including transport and lunch for over 250 students with accompanying teachers from 11 schools and community groups and more than 50 members of local community groups.



One of the amazing sand sculptures created as part of the Diani Sea Turtle Festival Sand Sculpture Competition.

12 marine conservation organisations showcased their work and we had a host of fun sea turtle themed activities, including a sand sculpture competition, scavenger hunt, student performances, an arts and crafts tent, and Tony Wild Photo Competition. We were thrilled to see good attendance throughout the day.

In the last three months, we also continued engaging with national and international students, conducting interactive workshops for 21 Camps International students from Saudi Arabia and Italy and 70 Infinity Outdoors students from an international school in Nairobi. At the end of May, Msambweni Turtle and Marine Conservation Group hosted an exciting community workshop to celebrate the opening of their revamped education centre. We have worked closely with the group for the last six months on this project, kindly supported by Msambweni Beach House.

Furthermore, we conducted BMU workshops for five new fishing communities, assisted by previously trained sea turtle ambassadors and Kenya Wildlife Services. This expansion of the Sea Turtle Conservation Program in Kwale County will establish ambassadors in nine fishing communities, covering 50 km of coastline in the Diani-Chale Marine National Reserve by year-end.





### Identified Sea Turtles Kenya

**Green Turtles** 

Since 2018

2024 Q2

Sites w/sea turtles sighted

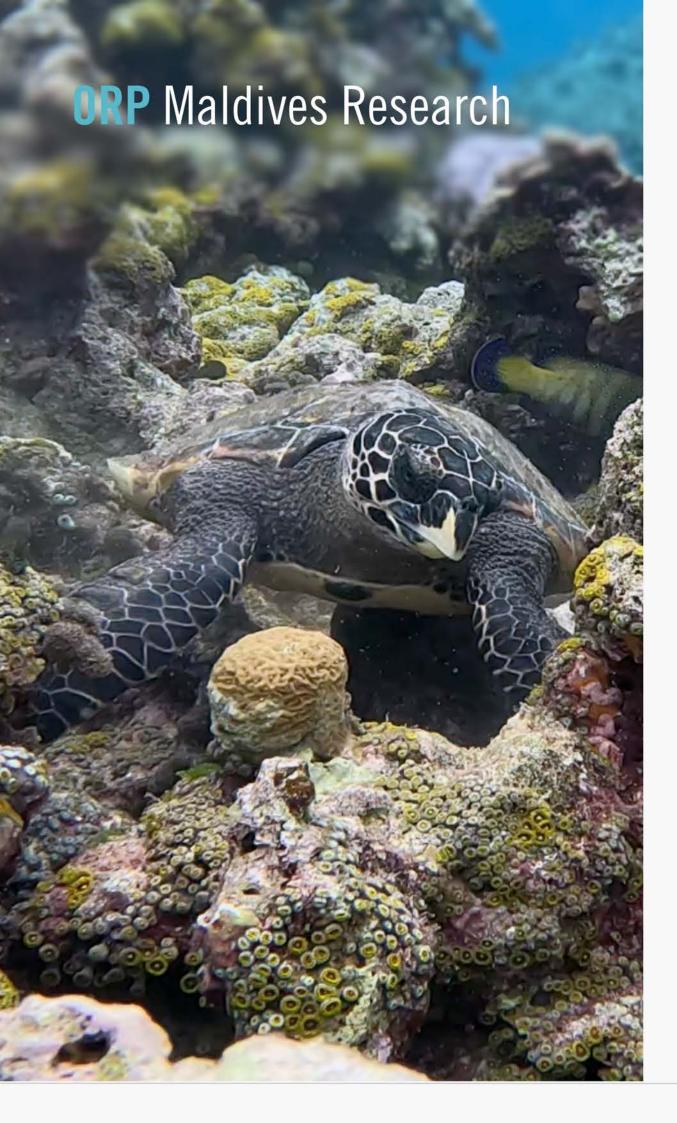
Hawksbills

Since 2018

2024 Q2

762

Total sea turtles identified



The second quarter of the year saw the change of monsoon seasons which is usually accompanied with challenging weather and rough sea conditions in the Maldives. As expected, our team observed a drop in ghost nets and entangled turtle reports, which came as a relief after the very busy start of the year.

With the Rescue Centre running on full capacity, we are very excited to have opened our brand new Raa Atoll Sea Turtle Rehabilitation Centre located at JOALI BEING. This rehabilitation centre further expands our network from Baa and North Malé, providing greater capacity for emergency housing and rehabilitative care for sea turtles across the country. Due to the recent entanglement season pushing rescue and rehabilitation facilities in the Maldives to their limits, these additional facilities are much needed.

#### Did you know?

With over 40,000 registered and identified turtle encounters across the country, ORP Maldives has one of the largest Photo-ID databases in the world.

Our Photo-ID programme continues to progress smoothly thanks to the many dedicated citizen scientists and supporters, as well as ORP team members. We have now identified a total of 6,512 sea turtles in the Maldives, including 1,607 green turtles and 4,905 hawksbills.

Sea Turtle Biologist Philippa in North Malé is currently managing our largest atoll catalogue of hawksbills in the country with 985 identified individuals - we are getting very close to the magic four digit number! Meanwhile, our Baa Atoll database remains the largest in the country with 1,167 identified turtles. Laamu is now the second largest with 1,101 registered individuals. In both atolls, prolific collaborators greatly contribute to our consistent Photo-ID efforts and we would like to thank them for their fantastic and continuing support.

In April, the ORP team in Laamu joined forces with other researchers from the Maldives Underwater Initiative, the Environmental Protection Agency Maldives, as well as citizen scientists from Secret Paradise and the islands of Maavah and Mundoo to embark on a 12-day Laamu Hope Spot Expedition sponsored by the Mission Blue's Hope Spot Initiative. The aim of the expedition was to expand our current understanding of Laamu's marine environments and

the threats facing them, while sharing knowledge through educational sessions and community involvement. During the trip, the team conducted 68 dive, snorkel, and island surveys to collect data on sea turtle abundance and distribution, illegal turtle harvesting pressure, coral health and bleaching severity, manta ray habitats, MPA ecosystem health, and marine megafauna distribution.

Another crucial part of the expedition was community involvement. We were happy to welcome community members and conduct training sessions for them on megafauna ID, turtle rescue, and coral bleaching monitoring. This enables the participants to conduct citizen science on their own islands in the future. The team also conducted several school outreach sessions. Read more about it on page 11.



The second quarter also saw the return of nesting turtles to several parts of the country, for example in Noonu Atoll, our team was kept on their toes especially towards the end of the quarter, with 72 false crawls and 23 new nests observed!

Excitingly, the last quarter saw the beginning of an official partnership with our long-time friends and collaborators, Atoll Marine Centre. This esteemed Maldivian NGO has dedicated many years to marine and sea turtle conservation. Together, we aim to strengthen efforts in sea turtle rehabilitation, photo identification, outreach and knowledge exchange in the coming years.

### **ORP** Maldives Education & Outreach

The last three months have been a time for celebrations in Maldives! In addition to National Children's Day in May, World Environmental Day, World Sea Turtle Day and Eid in June, we also opened Lohi Upcycling Workspace and took part in the Laamu Hope Spot Expedition!

The Laamu Hope Spot Expedition was made possible with a grant from Mission Blue's Hope Spot Initiative. In April, the Maldives Underwater Initiative (MUI) team, which includes ORP, along with the Environmental Protection Agency of the Maldives (EPA) and citizen scientists from Secret Paradise, Maavah, and Mundoo, embarked on a 12 day expedition to explore the less accessible northern parts of Laamu Atoll and engage with Laamu's communities. You can read more about the expedition on page 11.

Every year, Maldives celebrates National Children's Day on May 10th. This year, we participated in a festive event organised by Malé City Council and the Women's Development Committee which brought together different organisations working in science and conservation. At our stall, we provided infographics on ghost nets, sea turtle true or false flip charts, and of course games! The most popular game by far during the event was a sea turtle themed crossword puzzle. The children loved it and, of course, they each won a prize after completing the puzzle. Our team reached around 250 participants during the event.

Then, on World Environment day we visited Munavara School on Maroshi Island in Shaviyani Atoll, where we conducted a session on the importance of sea turtles for Maldives' ecosystem and economy.

World Sea Turtle Day is our favourite day of the year, of course! This year, World Sea Turtle Day fell during the Eid al-Fitr holidays in the Maldives, and we joined the celebrations with a special event – Velaa Eid Ufaa in L. Fonadhoo.

Co-hosted by ORP, Environmental Protection Agency, and Fonadhoo Environment and Sustainable Development NGO (FESD), Velaa Eid Ufaa was a resounding success, bringing in the local community for a day of cultural celebrations and awareness. More than 100 people attended, including children, teenagers, and parents, showcasing the community's spirit and commitment to marine conservation.



MUI, Maldives Police Service, Maldives National Defence Force, Fire and Rescue Services, Laamu Youth Society, Maldives Resilient Reefs, and Licious all hosted stalls offering fun and engaging activities. MUI's stall was a highlight with its sea turtle egg carton painting station, where children expressed their creativity while learning about sea turtles and their habitats. A display of sea turtle embryos also captivated attendees, offering insights into the early stages of sea turtle life and the conservation efforts needed to protect them. Entertainment included a captivating "Dhandi Jehun" performance by a local group from Fonadhoo, showcasing traditional Maldivian music and dance. We would like to thank FESD for coordinating the event. Velaa Eid Ufaa was supported by the GEF Small Grants Programme facilitated by UNDP Maldives, and by Ooredoo.

We're thrilled to announce the opening of the Lhohi
Upcycling Workspace in Noonu. This was made possible
through a partnership between the Secretariat of Lhohi
Council, Zero Waste Maldives, ORP, and the International
Pole and Line Foundation (IPNLF), supported by a grant from
Satlink. The facility repurposes ghost gear and other waste
materials into usable and saleable products, with a goal to
generate income for the community using a circular economy
model. Zero Waste Maldives designed the makerspace to
maximise production capacity in a small space. An ongoing
Upcycling Challenge is open to the community to generate
product ideas and show us what they can make. All proceeds
from the project go back to the community and the makers.





**Green Turtles** 

1,656 4,978

Total

2024 Q2

Total

2024 Q2

740

Sites w/sea turtles sighted

**New Nests Laid** Hawksbills

2024 Q2

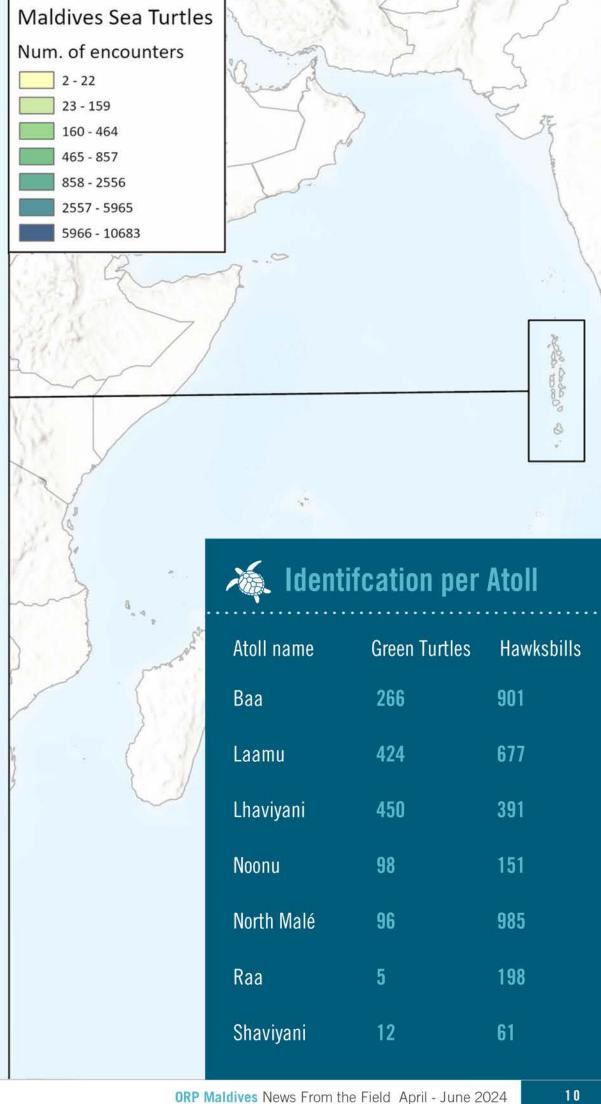
30

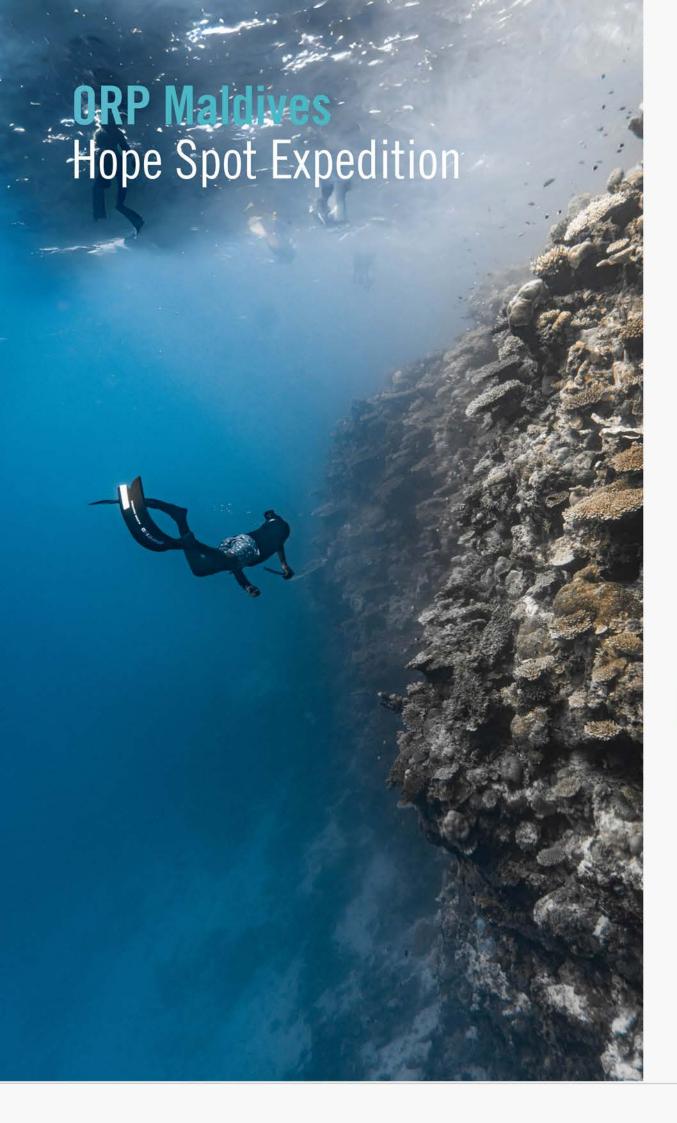
Hatchlings counted

6,634

Total sea turtles identified







We have been based on Olhuvelhi Island in the southern end of Laamu Atoll since 2018. Our survey efforts have mainly been focused in areas that are accessible from our base by boat. However, a grant from Mission Blue's Hope Spot Initiative allowed us to embark on an expedition to explore the less accessible northern Laamu Atoll and engage with the communities in the region. The aim of the expedition was to expand our current understanding of Laamu's marine environments and the threats they face while sharing knowledge through educational sessions and community involvement.

Last April, a team of 12, comprising researchers from the Maldives Underwater Initiative (MUI), including ORP, Manta Trust, Maldives Resilient Reefs/Blue Marine Foundation, and Six Senses Laamu, and the Environmental Protection Agency (EPA), as well as citizen scientists from Secret Paradise, Maavah and Mundoo, set off for an eventful 10 day journey.



The explorers conducted 68 dives, snorkels, and island surveys to collect data on sea turtle abundance and distribution, illegal sea turtle harvesting pressure, coral health and bleaching severity, manta ray habitats, MPA ecosystem health, and marine megafauna distribution. Similar to observations made in other parts of the Indian Ocean, the team documented the devastating effects of high ocean temperatures on vital and previously pristine coral reef habitats.

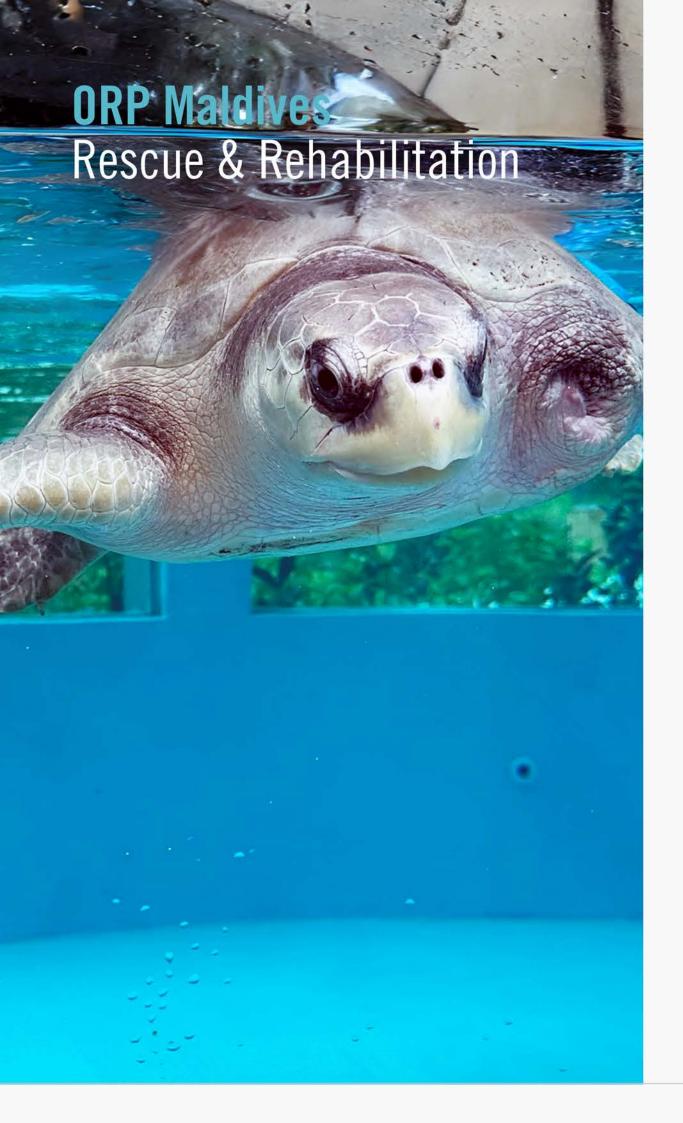
We successfully collected sighting data for 26 hawksbills and 17 green turtles during the expedition, adding new individuals to our database and making Laamu the atoll with the second-largest number of sea turtles identified in the Maldives!

The island surveys revealed evidence of illegal sea turtle harvesting on three of the 16 uninhabited islands surveyed between Maabaidhoo and Maavah. Remains from an estimated 46 sea turtles were also collected, mostly from Kashi Guraidhoo Island—a known site of historic and ongoing illegal sea turtle harvesting. Additionally, evidence of nesting activity was observed on two islands near the Vadinolhu and Munyafushi Channel.



Environmental stewardship and community engagement were core objectives of the expedition. To foster these goals, three Laamu residents joined our team and received comprehensive training in megafauna identification, sea turtle rescue, and coral bleaching monitoring. These participants are now equipped to undertake citizen science initiatives on their home islands. We also conducted educational outreach programmes in four schools across the atoll, engaging 108 students in interactive marine life lessons.

A detailed report summarising the expedition's findings will be shared with communities and councils throughout the Laamu Atoll.



The second quarter of 2024 continued to be challenging with all sea turtle rescue facilities in the Maldives running at capacity. We admitted a total of three new patients in the last three months, including Vaarey, Nimaya and Maali. At the peak of the season, we had 13 patients in our care.

We are therefore extremely happy to announce the long awaited opening of the new Raa Atoll Sea Turtle Rehabilitation Centre, located at our partner resort JOALI BEING in Raa Atoll. This new facility will increase our capacity to care for injured and diseased sea turtles in the Maldives by housing patients no longer in need of direct medical care, thus freeing up critical care tank space at the Marine Turtle Rescue Centre. The Raa Atoll Sea Turtle Rehabilitation Centre is our second facility of its kind in the Maldives, joining the North Malé Sea Turtle Rehabilitation Centre at our partner resort One&Only Reethi Rah.



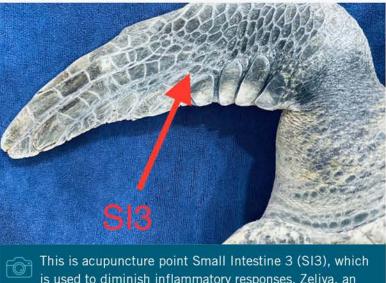
The first patient to be transferred to Raa is Kurangi (left) who has made great strides in her diving abilities since moving to a bigger and deeper tank. Kurangi is being cared for by our on-site sea turtle biologist and an intern, under the direct supervision of the veterinary team.

Regrettably, we lost two patients this quarter, Raalhu and Nimaya. However, amidst these losses, we celebrated the successful release of Kadhuru, Usha and Iru.

It was a very busy "entanglement season" this time around. So far this year, we have admitted 14 new patients and treated 24. Since 2017, we have treated a total of 244 sea turtles in distress with a 61% success rate. 78.5% of the patients have been olive ridleys, and the main reason for admittance is entanglement in ghost gear and marine debris.

As we move into the second half of 2024, we hope that the change in weather patterns will give sea turtles a respite from ghost gear entanglements and allow us to focus our energy on rehabilitating our current patients successfully.

We have many tools in our toolbox to help our sea turtle patients recover successfully. Some include the latest technology in medical equipment, such as a Class-4 therapeutic laser, ultrasound, endoscope and a digital radiography system. However, we also use more traditional methods. Veterinary acupuncture is an ancient form of Traditional Chinese Medicine that has been practised by veterinary surgeons for over 3,000 years. Acupuncture uses nerve bundles within acupuncture points that are aligned along meridians throughout the patient's body, which offer opportunities for therapeutic interventions for the clinician.



This is acupuncture point Small Intestine 3 (SI3), which is used to diminish inflammatory responses. Zeliya, an adult olive ridley sea turtle, was treated by our veterinary surgeons with acupuncture on SI3 to improve her range of motion as part of her comprehensive therapy.

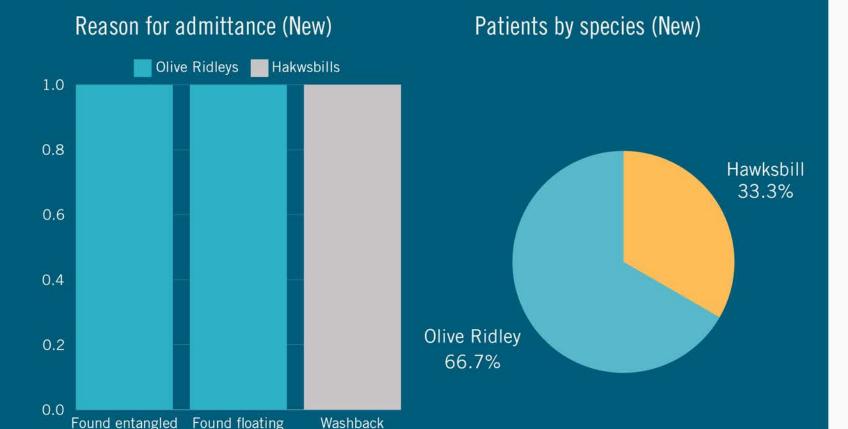
For our patients, our veterinary surgeons use a modified version of acupuncture called aquapuncture, which uses the same acupuncture points as traditional dry needle acupuncture but replaces the dry needle with a small injection of medicine. This technique shortens the period of time a patient is out of their hospital tank and is believed to have improved results over traditional dry needling.

The most common indications for using acupuncture in sea turtles are conditions of chronicity: lameness, head trauma and pain management. Our lead veterinary surgeon is boardcertified in Veterinary Acupuncture and trains other sea turtle veterinary surgeons around the world in these techniques.

Zeliya and Handhu are two examples of patients who received aquapuncture therapy. Both were olive ridley entanglement victims who were successfully treated and released.

### **ORP Maldives** Our Turtle Patients

		2024 Q2	2024	Since 2017
	New patients admitted	3	14	244
4	Patients released	3	10	141
<b>10</b>	Patients deceased	2	3	91
A.	Patients treated	17	24	244
冷	Patients still in care	12		



#### **New Patients Admitted**

Vaarey, which means 'rain' in Dhivehi, is an adult male olive ridley turtle. He was found entangled with a ligature injury to his neck. He had also ingested a long fishing line which resulted in a gastrointestinal condition. Vaarey has progressed greatly since then. His neck wound has completely healed and he is steadily gaining weight and undergoing dive training. Admitted 14/04/2024

Nimaya, Dhivehi for 'peaceful', was an adult female olive ridley turtle found floating adrift and unable to dive. She was likely an entanglement victim as she was missing three flippers with only her right front flipper remaining. Given her chronic debilitation and despite the team's best efforts, she passed away shortly after arrival. Admitted 4/05/2024 Deceased 4/05/2024

**Maali** is a juvenile hawksbill turtle that washed ashore very weak and lethargic. She was suffering from impaction (poor intestinal function) and a trauma to the left eye. After a week of supportive medical therapy she has now started to regain her appetite, her eye is improving and she is becoming more active. Admitted 19/06/2024



#### **Veterinary Training Programme**

In April, we relaunched our Visiting Vet
Programme as a Veterinary Training
Programme. So far we have welcomed three
trainees: Dr Kelvin from Kenya was our first
sponsored veterinary trainee, followed by Dr
Ashley from the US and Dr Albert from Spain,
who were both self-funded.

#### Case Study: Vaarey



Vaarey, upon rescue had a fishing line coming out of his mouth.

Vaarey arrived at the Rescue Centre with not only the usual ligature injuries to his neck but also a partially ingested fishing line. Ingested fishing lines can often be fatal as they have potential to cause blockage, constriction or tearing of the gastrointestinal tract which often leads to death. Therefore, our veterinary team used a variety of treatments and monitoring techniques to closely manage and assess each condition of the intestinal tract using novel clinical and imaging tools.

Our veterinary surgeons used a specialised tracking technique to monitor the progression of the line through the gastrointestinal tract using material that can be seen on X-rays



The fishing hook can be seen travelling through Vaarey's internal cavity on X-rays.

Thanks to this method, Vaarey was able to safely pass the 1.5-meter fishing line, leading to an improvement in his gastrointestinal issues. The veterinary team then focused on addressing his buoyancy syndrome through Targeted External Weight Therapy, helping him improve his diving.

### **ORP** Oman

Following the theme from the first three months of the year, algael blooms continued to affect water conditions in the otherwise stunning environment of Zighy Bay, Musandam Peninsula. The vividly green waters might have provided comfortable privacy for the resident green turtles, but proved to be a real challenge for our Photo-ID programme.

While only six turtle sightings resulted in a positive identification, we took the opportunity to look back and analyse our Photo-ID project since its inception in 2019 up until the end of 2023. Despite a pandemic induced halt to our work in Oman for the majority of 2020 and all of 2021, our survey efforts have given us important insight into the turtle population of Musandam.



GM067, sighted at the end of April 2024 for the 24th time exactly two years after their first record!

After more than 800 sea turtle encounters, it has become very clear that the area around Zighy Bay is of special importance to juvenile green turtles. The animals that we encounter most often, at least 2-3 sea turtles per survey, nearly all range from 30 to 50 cm of shell length. Juvenile sea turtles at this size usually spend their first years in coastal habitats with rich foraging grounds where they can focus on two things - foraging and resting, which matches our observations from Zighy Bay. The region might be an important recruitment area, a first stepping stone for the next generation of sea turtles to grow and thrive before being reproductively active.

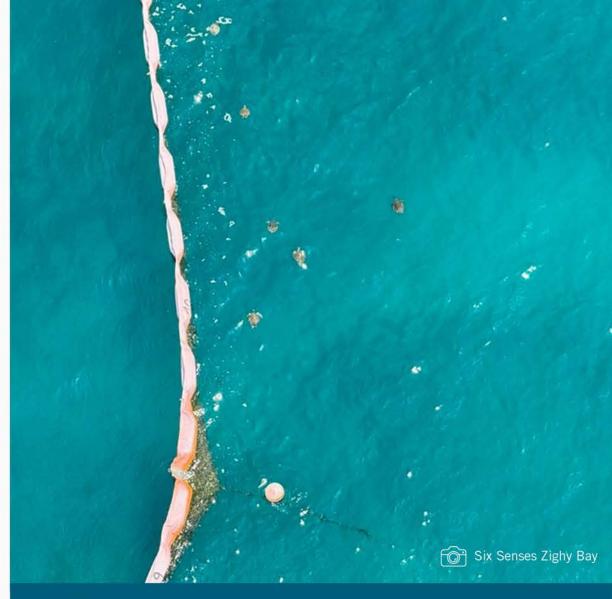
Interestingly, only 19 individual sea turtles made up a significant portion of all encounters throughout the years,

such as GM067 in the photo on the left. These individuals showed incredible site fidelity, never being spotted in any other location other than Zighy Bay. We are hoping to identify the defining characteristics that make Zighy Bay such a favoured sea turtle habitat through further surveys in the coming years.

In the past three months, decreased fishing activity in the area has resulted in a reduction of bycatch incidents. While bycatch remains a concern in Oman, efforts are underway to mitigate its impacts through regulatory measures, research, and national cooperation. Our bycatch monitoring will continue through the end of the summer months, when fishing activity typically increases. Continued attention to sustainable fishing practices and conservation efforts is crucial to minimise the unintended consequences of fishing activities on marine biodiversity and we are aiming to work with the affected communities to establish sustainable and well accepted solutions for all stakeholders.



In June we saw a change in team members in Zighy Bay, with Davide passing on the torch to Jasmine, who will be leading our Oman project from now on. We thank Davide for his tireless efforts and wish him all the best for the future.



### Identified Sea Turtles

**Green Turtles** 

Since 2020

2024 Q2

2024 Q2

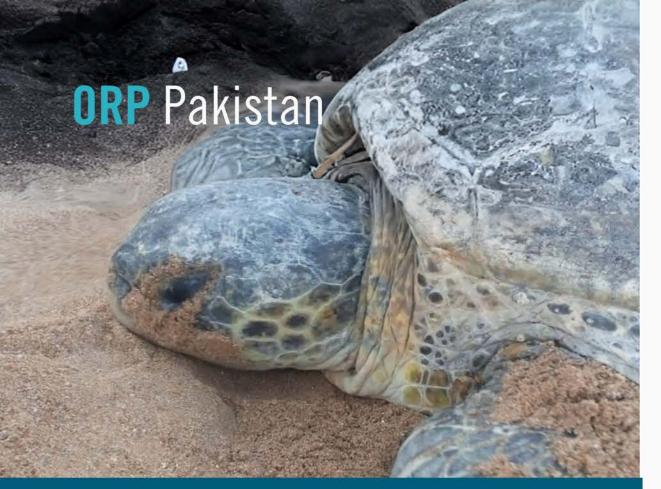
Hawksbills

Since 2020

Sites w/sea turtles sighted

Total sea turtles identified







### ORP Pakistan By The Numbers

Ghost gear recovered

Since 2018

**32KG** 2024 Q2

Flase Crawls

Since 2023

2024 Q2

Ghost gear repurposed

 $>6.4K KG > 58.4K_{SQM} 712$ Since 2018

Pet Leashes Sold

Pet leashes made

2024 Q2

**Nests Laid** 

Since 2023

2024 Q2

817.6K PKR

Income generated

Green Turtles Identified

Since 2023

Between April and June, we carried out 14 field trips to monitor nesting beaches and collect data in Pakistan. During this time, all our surveys took place in the Hawkes Bay area due to Sandspit being mostly submerged during high tide. We recorded 23 instances of true nesting activity and six false crawls, meaning the female sea turtle came onto the beach but left again without laying her eggs.

The largest tracks we observed measured 112 cm, and the smallest was 76 cm, all from green turtles. We are also pleased to report that Pakistan is now live on the Internet of Turtles database with our first successful Photo-ID! GP001, a nesting female from Hawkes Bay (left) is now named Mehreen.

In the last three months, we have also removed 32 kg of ghost gear from Hawke's Bay. Our in-field coordinators, Asif and Hanif, discovered the net entangled on the reef rocks during one of their regular sea turtle surveys.

The beaches of Hawkes Bay and Sandspit are dotted with around 500 privately owned beach huts that visitors can rent for the day or even to stay in. Each house has a designated caretaker, who sometimes also doubles as a guard.

In June, we gathered 15 such caretakers, along with nine additional participants (brothers and friends of the caretakers) for a sea turtle conservation awareness event in Kakapir. We talked about our work and explained what we are doing on the beach and how data collection and research helps us protect sea turtles.

The caretakers and guards cover a nine km stretch of beach between them and are present every day. Hence, they would make excellent citizen scientists and could make a significant contribution to our data collection efforts. We explained how they can help us monitor the sea turtle population in the area by submitting photos of sea turtles they encounter for ID purposes, and we encouraged them to report nesting and hatching events as well as washed up ghost gear to us.

We are also hoping they can be part of our outreach efforts by making beach visitors aware of the threats that humans pose to sea turtles and even encourage visitors to follow our sea turtle code of conduct for sea turtle encounters, including not leaving trash behind and avoid shining artificial lights on nesting sea turtle mamas. We provided all the participants with ORP branded T-shirts and caps to help increase awareness about our work and presence in the area.



Football is a very popular sport in Pakistan. Football clubs and football tournaments are therefore a great place to reach and meet people. In June, we supported Pakistan Soccer League, a popular football tournament in Karachi. The tournament featured nine teams and has an average of 5,000 spectators per match. ORP banners was visible throughout the tournament in both English and Urdu.

We continued our football themed outreach by visiting Hyderi Football Club in Ibrahim Hyderi, is a fishing village located East of Karachi, in June. Two teams from Ibrahim Hyderi – Gadap Soldiers and Korangi played in the Pakistan Soccer League and one of the venues for the tournament was Baloch Mujaid stadium in Ibrahim Hyderi. The village is part of the Indus Delta – an important fishing location – and has the largest fishing port in Karach. It is reported to be 250 years old and home to 200,000 inhabitants.

We met with 31 local and offshore fishers, many of whom also play football, at the Football Club for a sea turtle awareness event. Here we spoke about the threats of ghost gear, ghost gear entanglement and bycatch, as well as the important role sea turtles play in the marine ecosystem and how that relates to our own lives. The fishers were also trained in the safe release of entangled sea turtles and they promised to report any entanglement cases to us.

Many of theses fishers fish in offshore waters and reported that they have witnessed five species of sea turtles in Pakistan's territorial waters. They are also familiar with the Indus Delta Creek and reported that they have seen evidence of sea turtle nesting activity in a few of the creeks, including Chann Creek. We are now investigating which areas of the Indus Delta Creek are most likely to have sea turtle nesting activity and the possibility of surveying these areas.

### **Meet** the Team

#### Charity Management & Operations



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JANNICKE C HALLUM SENIOR PROJECT



LEAD VETERINARY SURGEON



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AMBASSADOR



**AMBASSADOR** 

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We deeply appreciate each and every one of our citizen scientists for their invaluable Photo-ID contributions – please continue to share your photos with us! And last, but not least – a big thank you to everyone who donated to our first ever Big Give Green Match Fund Campaign in April and to Legend Bracelets and the Reed Foundation for matching the funds from our donors.



#### Partners & Collaborators



























































































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